

Abstract Submitted  
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**Comprehensive Analysis of Implosions of Single Planar Tungsten Wire Arrays with Aluminum Center Wires Produced on a 1-MA generator**<sup>1</sup> G.C. OSBORNE, A.S. SAFRONOVA, V.L. KANTSYREV, A.A. ESAULOV, M.F. YILMAZ, K.M. WILLIAMSON, M.E. WELLER, I. SHRESTHA, University of Nevada, Reno — An analysis of five-wire W single planar wire array (SPWA) experiments with Al center wires is presented. Comparisons are drawn to previous work which focused on SPWAs with smaller inter-wire gaps of pure W loads and W loads with single Al wires on the edge of the array. Experiments were performed on the 1MA generator “Zebra” at UNR, with data taken on a pulse laser shadowgraphy apparatus, an x-ray time-gated pinhole camera, and both time-integrated spatially resolved and time-gated spatially integrated spectrometers. Utilizing this full suite of plasma diagnostics, comprehensive set of data with staggered timings has been compiled. Non-LTE kinetic modeling is used to describe temperature and density features of the spectral data, while the Wire Ablation Dynamics Model is utilized to better understand implosion dynamics.

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G.C. Osborne  
University of Nevada, Reno

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